ABSTRACT

[Means to solve problems] The process for preparing a cycloolefin addition polymer comprises addition-polymerizing monomers containing a specific cycloolefin compound in the presence of ethylene and a multicomponent catalyst containing, as essential components, (a) a palladium compound, (b) a compound selected from an ionic boron compound, an ionic aluminum compound, a Lewis acidic aluminum compound and a Lewis acidic boron compound and (c) a specific phosphine compound or its phosphonium salt. [Effect] A cycloolefin compound is addition-polymerized using a specific palladium catalyst and using ethylene as a molecular weight modifier, whereby a cycloolefin addition polymer having a molecular weight preferable for a sheet or a film used for an optical material can be prepared using small amounts of the molecular weight modifier and the palladium catalyst.